ISRU – Inflatable Space Rescue Unit
for Orbiter space simulator 2006 & 2010

This addon require UCGO addon available here:
http://orbiter.dansteph.com/index.php?disp=d

Content:

Introduction / History

By the year 2064, studies showed that out of 87 major spacecraft accidents, only 8% of the crews aboard survived. While some accidents such as reentry failures or explosions were instantly fatal, many disasters such as engine failures or environmental control system malfunctions would have been survivable had rescue vessels been able to reach the crew in a timely matter. The Inflatable Space Rescue Unit is the much-needed solution to this problem. Its unique, compact cryogenic systems allow a standard crew of 3 to survive approximately 6 months isolated in space or on a planetary surface or 5 months with a larger crew of 4. If the unthinkable should happen and rescue vessels are unable to reach the stranded ISRU in time, the onboard Thanatos program will terminate the crew quickly and painlessly, preserving the bodies for later recovery.

« ISRU: Your liferaft in space» (MSRP $27,499)

ISRU (Inflatable Space Rescue Unit)

Outter Hull
Inner Hull
Isolating foam
RCS

External rescue control
Cryogenic & life system
Internal reserve (food water)
Instrument and controls
Camera
Airlock

Lenght:	2.80m
Diameter:	2.00m
Weight:	526kg
Life reserves:	5 days (6 month with cryogenic)
Capacity:	3 crews
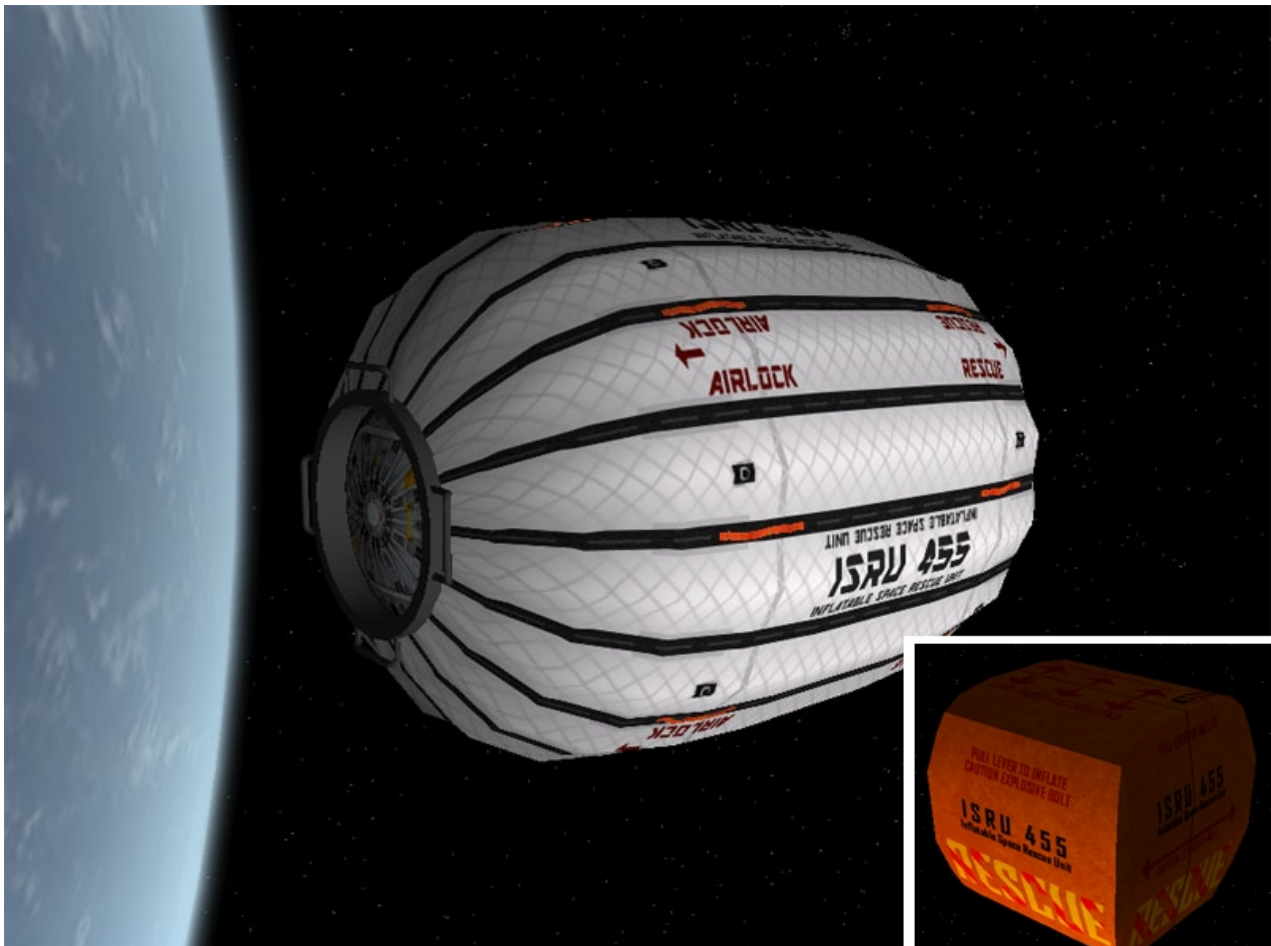
Design limits:
- **With a max hull temperature of 800C°, the ISRU cannot survive a full reentry.**
- **The ISRU will only remain structurally stable in a ground impact of 6 m/s or lower**
- **The onboard RCS is not for orbital maneuvers, but for attitude control only.**

Orbiter operation

Try ISRU scenarios:

The best way to learn how to operate the ISRU is to try the « learn » scenario. There is two more challenging scenarios for you to try. (for the « moon » scenario you must have the DGIV-2 installed)

Adding ISRU to scenario / vessel:

You can either use the scenario editor (UCGO/Cargo) to add the packed cargo version in a scenario or use the utility key (usually 9/SHF+9) to add a ISRU cargo to a UCGO compatible vessel or vehicle. You can add also the inflated ISRU vessel to a scenario with scenario editor (UCGO/Vessels).

Evacuation operation

After ejecting the ISRU cargo you must reach it with UMmu and unpack it (key « U »). Once inflated you can ingress up to 4 UMmu (max recommended crew is 3). As soon as all crew members are in, launch the
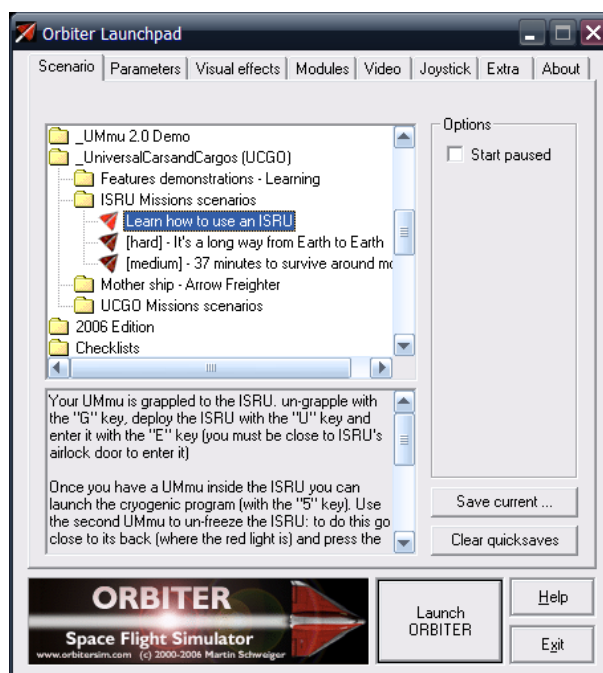
cryogenics system. (key « 5 »). Due to the extremely limited space available in the ISRU, it is recommended to activate the cryogenics as soon as possible to prevent psychological trauma to the crew.

Rescue operation

When the cryogenics are activated and the status light is red, you must use a rescue UMmu to deactivate the cryogenics system by pulling the rescue lever. Once this has been done, the crew will awaken and be able to EVA to the rescue ship. Alternatively, dock the ISRU to any vessel which will automatically awaken the crew and unlatch the airlock.

ISRU in cryogenic state (red light). Go to bottom with a UMmu and activate
the rescue lever (key « RETURN » in UMmu) to awaken the crew.
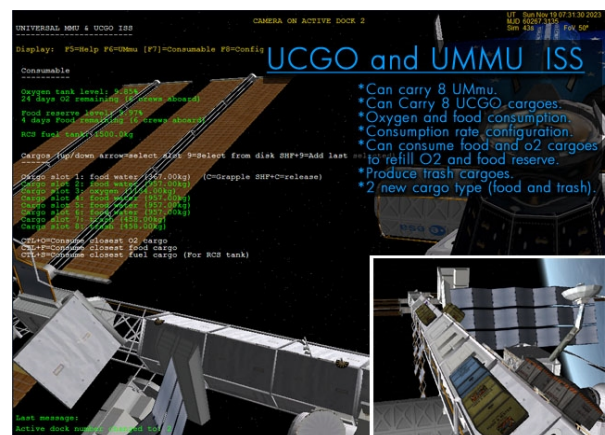OR
Dock the ISRU to any vessel.

More UCGO addons

ISS, ShuttleA and other addons compatible UCGO by me can be found here:
http://www.orbithangar.com/searchauth.php?search=dansteph

My addon page:
http://orbiter.dansteph.com/index.php?disp=d

Other UCGO compatible addons from others authors can be found here:
http://www.orbithangar.com/search_quick.php?text=UCGO&submit.x=0&submit.y=0

Thanks to Shadow Addict for the correction of this doc